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## Internship at a Cutting Edge CIRM-funded Stem Cell Research Facility

### Grant Award Details

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Internship at a Cutting Edge CIRM-funded Stem Cell Research Facility

**Grant Type:** SPARK

**Grant Number:** EDUC3-08407

**Project Objective:** The project objective is to manage the SPARK program that provides 8 week stem cell research internships for high school students. The Program Director was in charge of recruiting students from underprivileged communities, place these students in stem cell research labs at leading institutions in California, and train the students in stem cell science and research techniques. The PDs were also responsible for implementing the CIRM social media guidelines which included having students post pictures about their internship experience on Instagram and write a blog. They also had to coordinate a patient engagement activity where students get first hand experience with patients and what they go through. Lastly the PDs had to coordinate their students attendance at the 2016 SPARK conference, making sure that their poster presentations and speeches were prepared.

**Investigator:**

<b>Name:</b>	Gerhard Bauer
<b>Institution:</b>	University of California, Davis
<b>Type:</b>	PI

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**Award Value:** \$398,750

**Status:** Active

### Grant Application Details

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**Application Title:** Internship at a Cutting Edge CIRM-funded Stem Cell Research Facility

**Public Abstract:**

The CIRM SPARK Program is a motivating, stimulating and rewarding experience encouraging young people from the State of California to enter the field of stem cell biology and research. This has been proven in our Stem Cell Program by five years of summer internships, starting with a pilot program conducted with four high school students in the summer of 2011 and then expanded to 10 students at our institution for four additional years, allowing highly motivated and talented students from Northern CA high schools a unique opportunity to develop skills in stem cell biology and research.

This opportunity will be available again through the new CIRM SPARK internship program. At our institution, as in the previous years, participants are selected from the winners of a highly competitive award program in the field of biotechnology, called the Teen Biotech Challenge. High school students are asked to create and design a public website in the field of biotechnology. Through the Teen Biotech Challenge Program, students gain skills in research and creative web design, while achieving recognition from peers, educators and members of the biotech community. This program attracts a pool of students from Northern California high schools who are interested and highly motivated, and is targeted toward high schools with high levels of diversity.

Ten winners of the challenge are then chosen for an internship in our stem cell program. Guided by a mentor in the team that most closely matches their interests, they intern in one of our laboratories involved in developing cutting edge stem cell treatments for heart disease, diseases that affect the brain, liver, kidney, and bladder, bone, skin, eye disease, and others. Our state-of-the-art Good Manufacturing Practice (GMP) Facility is an important part of this internship, which is a highly unique opportunity, as this facility manufactures stem cells for clinical applications.

Students will participate in a theoretical and practical class in stem cell biology and manufacturing practices, earn a certificate of GMP training, will experience clinical activities in our medical school's student run clinics. The activities in the clinics will expose the students to the needs of medically underserved communities and will allow them to contemplate the application of stem cell treatments in diseases not treatable by conventional medicine. The interns will prepare and present, in front of their peers and CIRM officers, a poster about their project.

This internship program will benefit the State of California greatly. Excellent researchers and tremendously skilled biotechnology laboratory personnel will be needed in the near and extended future to produce stem cell treatments in California which are currently developed and moved into the clinic by CIRM funded stem cell research laboratories. These young people are the future of California's health and economy.

**Statement of Benefit to  
California:**

The CIRM Creativity Program has provided five years of summer internships at our institution for high school students from diverse backgrounds throughout Northern California. The summer spent at a cutting edge stem cell research facility was not only a highly educational experience for the students, but also helped them shape their intentions for a future career in science and possibly stem cell research in the State of California.

Our previous experience and the new program planned for the coming years highlights the following areas of benefit to the State of California: Highly motivated and talented students are chosen from a large pool of applicants who may become California's future leaders in biotechnology and stem cell biology. The applicants are selected through our institution's Teen Biotech Challenge Program, which in itself is already benefiting the state, as it develops a large number of students' interest in a career in biotechnology. High school students create and design a public website in the field of biotechnology, and the merits of the sites are judged by faculty members and biotech leaders in the field. This program attracts a pool of students from Northern California high schools who are interested and deeply motivated, and is targeted toward high schools with high levels of diversity.

For the SPARK internship program, ten of the best students from the Teen Biotech Challenge are selected. Selection criteria are based on their specific field of interest, the quality of their work, and their motivation. The success of our previous summer internships proves that this method of selection provides a student pool that is diverse, profoundly motivated and well qualified, with a great chance of succeeding in the summer program. Ethnic diversity of the selected students is another factor taken into account during selection, appropriately reflecting the ethnic composition of the state of California. Interested and motivated high school students are of extremely diverse backgrounds and may also be of under served status; they are shown a career path that may not have been available to them otherwise, and are often the first in their family to attend college, aided by their experience in the internship and our assistance with applying for prizes and scholarships.

A pool of excellent researchers and tremendously skilled biotechnology laboratory personnel will be needed in the near and extended future to manufacture stem cell treatments in the state of California, which are currently developed and moved into the clinic by CIRM funded stem cell research laboratories. These young people are the future of California's health and economy, and present the best possible investment for our state.

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**Source URL:** <https://www.cirm.ca.gov/our-progress/awards/internship-cutting-edge-cirm-funded-stem-cell-research-facility-o>